

# THE AIR LAND SEA BULLETIN



Issue No. 2005-2

Air Land Sea Application (ALSA) Center

May 2005



## Tactical Convoy Operations

### IN HOUSE

**Director's Comments**—Views of a new Director . . . . . 3

### FEATURE ARTICLES

**ALSA Anniversary Celebration!**—Brevity turns 10, JFIRE is 20, and the Center is 30. . . . 4

#### Tactical Convoy Operations

—Development of the MTTP for Tactical Convoy Ops . . . . . 6

**IED and Ambush Threats to Convoys Require Intensive Rehearsal**—Convoy personnel must be trained to detect and prevent IED attacks. . . . . 7

**The Logistics Convoy: A Combat Operation**—Key maneuver elements in a convoy operation are the gun trucks. . . . . 9

#### Convoy Survives Ambush

**in Iraq**—Tactics, techniques, and procedures for surviving an ambush. . . . . 11

**JSTARS Support of Convoy Operations**—JSTARS is a “system of systems” consisting of both airborne- and ground-based segments. . . . . 13

<b>Report Documentation Page</b>			Form Approved OMB No. 0704-0188	
<p>Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p>				
1. REPORT DATE <b>MAY 2005</b>	2. REPORT TYPE	3. DATES COVERED <b>00-00-2005 to 00-00-2005</b>		
4. TITLE AND SUBTITLE <b>The Air Land Sea Bulletin. Issue No. 2005-2, May 2005</b>		5a. CONTRACT NUMBER		
		5b. GRANT NUMBER		
		5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)		5d. PROJECT NUMBER		
		5e. TASK NUMBER		
		5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Air Land Sea Application (ALSA) Center, 114 Andrews St, Langley AFB, VA, 23665-2785</b>		8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)		
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>				
13. SUPPLEMENTARY NOTES				
14. ABSTRACT				
15. SUBJECT TERMS				
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>24</b>
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>	19a. NAME OF RESPONSIBLE PERSON	

# THE AIR LAND SEA BULLETIN (ALSB)

Air Land Sea Application (ALSA) Center

114 Andrews Street

Langley AFB VA 23665-2785

Air Land Sea Bulletin Staff

## Director

COL Michael Martinez, USA  
DSN 575-0960  
COMM (757) 225-0960  
[alsadirector@langley.af.mil](mailto:alsadirector@langley.af.mil)

## Deputy Director

USAF  
DSN 575-0959  
COMM (757) 225-0959  
[alsadirector@langley.af.mil](mailto:alsadirector@langley.af.mil)

## Publications Officer

Maj Brad "Slim" Pickens, USAF  
DSN 575-0903  
COMM (757) 225-0903  
[alsaa@langley.af.mil](mailto:alsaa@langley.af.mil)

## Editor

Beatrice L. Waggener, Civilian, USAF  
DSN 575-0850  
COMM (757) 225-0850  
[alsaeeditor@langley.af.mil](mailto:alsaeeditor@langley.af.mil)

## Publications NCO

TSGt Jorge Venegas, USAF  
DSN 575-0848  
COMM (757) 225-0848  
[Jorge.Venegas@langley.af.mil](mailto:Jorge.Venegas@langley.af.mil)

## Layout

Andrea Lard, Civilian, USN  
DSN 575-0908  
COMM (757) 225-0908  
[andrea.lard@langley.af.mil](mailto:andrea.lard@langley.af.mil)

**Purpose:** ALSA Center publishes *The ALSB* three times a year. ALSA is a multi-Service DOD field agency sponsored by the U.S. Army Training and Doctrine Command (TRADOC), Marine Corps Combat Development Command (MCCDC), Navy Warfare Development Command (NWDC), and Headquarters Air Force Doctrine Center (AFDC). This periodical is governed by Army Regulation 25-30, Chapter 10. It is a vehicle to "spread the word" on recent developments in warfighting concepts, issues, and Service interoperability. The intent is to provide a cross-Service flow of information among readers around the globe. **Disclaimer:** Since *The ALSB* is an open forum, the articles, letters, and opinions expressed or implied herein should not be construed to be the official position of TRADOC, MCCDC, NWDC, AFDC, or ALSA Center.

**Submissions:** We solicit articles and reader's comments. Contributions of 1500 words or less are ideal. Submit contributions, double-spaced in MS Word. Include name, title, complete unit address, telephone numbers, and e-mail address. Graphics can appear in an article, but you must also provide a separate computer file for each graphic. Send e-mail submissions to [alsaeeditor@langley.af.mil](mailto:alsaeeditor@langley.af.mil). ALSA Center reserves the right to edit content to meet space limitations and conform to *The ALSB*'s style and format. **Next issue: September 2005; Submission DEADLINE: COB, August 1, 2005.**

**Mailing/Distribution:** This publication is packaged for mailing by the ALSA Center and distributed by ATZG-BO-M, Bldg 183, McNair Drive, Ft Monroe VA, 23651.

**Reprints:** ALSA Center grants permission to reprint articles. Please credit the author and *The ALSB*. Local reproduction of *The ALSB* is authorized and encouraged.

**Subscriptions:** We continue to validate our subscribers's information and requirements. If you wish to discontinue your subscription of *The ALSB*, please contact the Editor by telephone or e-mail.

## ALSA PUBLICATIONS—ON THE WORLDWIDE WEB (WWW)

Visit our homepage: <http://www.alsa.mil> or

Classified Web site: <http://wwwacc.langley.af.smil.mil/alsa>

**The ALSB**—From our homepage you can access current and past issues. **Other ALSA Center Publications**—Executive summaries for all publications are available with a hyperlink to access them. Most current publications can be downloaded from the homepage from a .mil domain; restricted distribution publications can be downloaded at the above mentioned classified Web site.

ALSA publications are in portable document format (PDF) extension. You must have *Adobe Acrobat Reader* and a WWW browser such as *Internet Explorer* or *Netscape Navigator* to read, copy, or print these documents.

Also on our homepage you'll find information about ALSA Center's mission, its association with other doctrinal organizations, who's on our staff, and how we're organized.

You'll find our homepage is uncomplicated and easy to navigate. This makes it more usable for individuals new to using the internet and for units using slower circuits and older software. If you have suggestions for improving the site, please send your ideas to [alsawebmster@langley.af.mil](mailto:alsawebmster@langley.af.mil).

Cover Photo — USA Photo by Spc Johnnie French

---

## Director Comments — New Director, Air Land Sea Application (ALSA Center)

---

The Air Land Sea Application (ALSA) center located at Langley AFB, Virginia, continues to publish multi-Service tactics, techniques, and procedures (MTTP) focusing on meeting the *"immediate needs of the warfighter."* We have had some personnel losses over the past few months and are in the middle of a major renovation of our building but the work continues at ALSA unabated. We have recently said farewell to two Army action officers as well as the ALSA Director, Col Dave Petersen, who has moved on to group command in Del Rio, Texas. Congratulations to Dave on his selection, he was a great Director and we were fortunate to have had such a quality officer leading ALSA for the past year. As the Deputy Director under Dave, I have been able to learn the ropes and look forward to the next year as the ALSA Director.

Recently completed publications include *Joint Fires*, *UHF-TACSAT/DAMA Operations*, and *Tactical Convoy Operations*. Ongoing efforts at the ALSA Center include the development of MTTPs on *Brevity*, *Aviation Urban Operations*, *Kill Box Procedures*, *Explosive Ordnance Disposal*, *Unexploded Ordnance Disposal*, and *Cordon and Search*. The *Cordon and Search* MTTP is in the initial stages of program approval and when approved by the ALSA Joint Action Steering Committee (JASC) we will schedule the first joint working group (JWG) in June here on Langley AFB. *Tactical Convoy Operations* was put on the fast track publication process and Team E did a magnificent job bringing that critical publication in on time. There is no other process in DOD that can complete a doctrinal publication from start to finish in 6 months. This MTTP consolidates the Services' best tactics, techniques, and procedures used in convoy operations into a single multi-Service TTP

with the objective of reducing casualty rates and increasing the probability of mission success during convoy operations. To date we have had fifty-seven thousand copies of the rip-stop, weather proof, cargo pocket size version requested from across the Services. The publication is currently being printed and the complete publication can be downloaded from our Web site for those who need it now.

We continue to seek publication topics that fill interoperability or doctrinal voids between the Services. Those that make it through the program approval process are normally produced within 1 year and become Service doctrine for all Services. For more information on any of the MTTPs available here at ALSA, or to recommend a new MTTP topic for development, visit our Web site at <http://www.alsa.mil> or contact us at [alsaeeditor@langley.af.mil](mailto:alsaeeditor@langley.af.mil).



MICHAEL R. MARTINEZ, Colonel, USA  
Director



# ALSA Anniversary Celebration!

## Brevity turns 10, JFIRE is 20, and the Center is 30

by  
**Maj Bob Finn, USA**  
ALSA Center

This year the Air Land Sea Application (ALSA) Center celebrates its 30-year anniversary. The concept of our organization emerged after the Vietnam war when the Chief of Staff of the Army, General Abrams, and the Chief of Staff of the Air Force, General Brown, identified the need to stand up an organization to promote better Army/Air Force cooperation and to cut through the "red tape" of the multi-Service doctrine development process. Headquarters, Training and Doctrine Command (HQ TRADOC) and HQ Tactical Air Command (TAC) established the Air Land Forces Application (ALFA) Agency in June 1975 to meet those requirements. Looking back to 1975, 1985, and 1995, we have found some interesting issues that deserve mentioning in this anniversary article.



In 1975, both Services were influenced by the experiences of Vietnam and the lessons of the Arab-Israeli conflict. ALFA's first projects dealt with topics such as airspace management, air defense suppression, close air support, and air logistics. The product of this evolutionary effort resulted in a revised doctrine concept for the Army and the Air Force known as "AirLand Battle." AirLand Battle refocused the Services of the Vietnam era not only to adapt to a new strategy while fielding new weapons systems such as the Abrams M1 tank, the Bradley Fighting Vehicle, and the F-15 Eagle but also to prepare for the emerging Cold War with Russia. The

doctrinal concept was primarily defensive oriented emphasizing the necessity of absorbing the first attack on US forces, defensive attrition of attacking forces, and then counterattacking for final destruction of the enemy. These transitional years of doctrinal revision and increased multi-Service cooperation matured during the 80s.



PHOTO BY DEPARTMENT OF DEFENSE

The unexpected US intervention in Grenada (Operation URGENT FURY) during the fall of 1983 demonstrated multi-Service integration and interoperability was difficult and still had a long way to go. "Specifically, Service doctrine did not address the areas of joint operability."<sup>1</sup> Lessons learned during Operation URGENT FURY spurred ALFA on to develop and publish the original *Multi-Service Procedures for the Joint Application of Firepower (JFIRE)* pamphlet in July 1985 with a distribution of approximately 43,000 copies worldwide. JFIRE is 20 years old and continues to be ALSA's most popular and widely distributed publication. It is referenced in Joint Publication (JP) 3-09.3, *Joint TTP for Close Air Support*.

Additionally, *Combat Search and Rescue (CSAR)* was another project of ALFA that for the first time included participation and input from the Coast Guard. During this time frame, ALFA had a total of 20 active projects. Equipment modernization, rigorous training, and leader development were the hallmarks of an emerging joint force that would soon be tested in the 90s.

The stunning joint and coalition victory of Operation Desert Storm in 1991

<sup>1</sup> Air University, Air and Space Power Course, Operation Urgent Fury.



USN PHOTO BY MATE 3RD CLASS  
ANGEL ROMAN-OTERO

convinced the Services that joint warfare was here to stay. Although the military victory was a significant step in the integration of joint and coalition warfare, senior officers like Army Brigadier General Scales [now retired] continued to predict the need for greater cooperation between the Services in future conflicts: "It is essential that all aerial and ground platforms, regardless of the Service of origin, be blended together into an effective, seamless striking force."<sup>2</sup> Specifically General Scales noted that command, control, and communication procedures needed simplicity to better facilitate Service interoperability and integration.

Following Operation Desert Storm, lessons on the complexity of combat airspace command and control resulted in ALFA's publication of *Multi-Service Procedures for Integrated Combat Airspace Command and Control (ICAC2)* and *Multi-Service Tactics, Techniques, and Procedures for the Theater Air-Ground System (TAGS)*. Both publications were referenced a few years later in the Army's capstone doctrinal field manual for division operations.



USAF PHOTO BY SSGT LEE O. TUCKER

In 1992, ALFA changed its name to ALSA with the addition of Marine Corps and Navy officers to the staff. In 1995,

ALSA completed the first edition of an MTTP for common aircrew terminology, the *Multi-Service Brevity Codes (Brevity)*. It is another publication that has helped define ALSA. It is now 10 years old, revised every 2 years, and is used to facilitate integration and common understanding within the Services as well as our NATO allies. It is referenced in JP 3-09.3 as well.

A few years later in 1998, the Defense Reform Initiative Directive validated the joint billets at ALSA and retained ALSA as an independent organization rather than incorporating it into US Joint Forces Command (USJFCOM).



DOD PHOTO BY PO3 DUSTY HOWELL, USN

Today ALSA consists of seven teams with an Army Director and an Air Force Deputy Director. Although a preponderance of the action officers are from the Air Force and Army, the Center has one Marine and one Naval Aviator assigned. ALSA continues to champion Service integration as it quickly researches, develops, and distributes MTTPs that address Service interoperability gaps based upon the latest lessons learned from on-going operations worldwide. For instance veterans from Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) provided critical warfighter insights to help make ALSA's publications relevant and credible.

Upon approval by the Joint Actions Steering Committee<sup>3</sup> (JASC), the MTTPs are immediately implemented as Service doctrine for each branch of Service. ALSA MTTPs serve as the vanguard for the joint doctrine community who sees ALSA publications as cutting edge multi-Service doctrine that provides a window into the future initiatives of joint doctrine development. Participants in MTTP

**See Anniversary page 15**

<sup>2</sup> *Certain Victory: The US Army in the Gulf War*, Brigadier General Robert H. Scales, Jr., Washington, DC: U.S. Army, 1993.

<sup>3</sup> The commanders of the Service doctrine centers make up the voting members of the JASC.

# Tactical Convoy Operations



by  
**CDR John Evans, USN,  
ALSA Center**  
**Mr. Tom Wiggans, Alion Science  
and Technology**

During the November 2003 Joint Action Steering Committee (JASC) conference, ALSA was directed to research the need for a convoy operations multi-Service tactics, techniques, and procedures (MTTP) publication. Consensus among the four Services proved that such a publication would help mitigate the inherent dangers faced by combat convoy operations being conducted in Operation Iraqi Freedom(OIF).

A program approval package signed by the four Service doctrine chiefs recommended the *MTTP for Tactical Convoy Operations* be put on a "fast-track" status (6 months). Initial steps involved extensive research, numerous site visits, and development of a list of subject matter experts (SMEs) to assist with the content.

More than two dozen SMEs (some of them having just returned from the OIF theater), attended the ALSA-hosted Joint Working Group. By combining the information contained on existing quick reaction cards, in handbooks, and from lessons learned, and the knowledge gained via site visits, a draft publication was prepared and distributed for world-wide

review.

Following its review and adjudication of specific Service comments, the *MTTP for Tactical Convoy Operations* was signed in February 2005. Over 55,000 copies have been ordered, reflecting its wide-spread need by the warfighter in the field. It is currently being published in a cargo pocket-sized, spiral top-bound format, with weatherproof paper. [A downloadable PDF file is available on the ALSA Web site.]

The *MTTP for Tactical Convoy Operations* serves as a quick-reference guide, providing checklists designed for convoy commanders (CCs) operating in combat support and combat service support units. CCs are faced with a host of asymmetrical threats as they conduct tactical convoy operations on today's nonlinear, noncontiguous battlefield. Recent combat operations have introduced diversified threats that range from vehicle-borne improvised explosive devices (IEDs) to complex ambushes employing concealed IEDs, rocket-propelled grenades, and small arms.

The *MTTP for Tactical Convoy Operations* offers guidance on troop leading procedures, employment methods for gun trucks, battle drills, and updated information on IEDs. It will help enable convoy members, drivers, and leaders to better prepare, carry out, and debrief tactical convoy operations.

---

The *MTTP for Tactical Convoy Operations* offers guidance on troop leading procedures, employment methods for gun trucks, battle drills, and updated information on IEDs.

---

---

## **IED and Ambush Threats to Convoys Require Intensive Rehearsal**

---



USA PHOTO

by

**Capt Larry R Warfield II, USMC**

The expansion of asymmetric warfare has driven the warfighter to re-examine the training, tactics, techniques, and procedures (T3Ps) for conducting tactical convoy operations. The very nature of asymmetric warfare dictates that there are neither front lines nor rear areas. As illustrated in Operation Iraqi Freedom (OIF), ground troops, regardless of military occupational specialty or current mission, are at substantial risk. Insurgents have used improvised explosive devices (IEDs), vehicle-borne IEDs (VBIEDs), and both simple and complex ambushes to engage US and coalition convoys as they transit main supply routes (MSRs). Existing T3Ps no longer provide adequate response to the wide array of insurgent attacks. Convoy personnel must be trained to detect and prevent IED attacks

and ambushes and know what the immediate action procedures are when they do occur. T3Ps are rehearsal intensive, requiring every convoy member to recognize a threat situation and react immediately and appropriately.

### **Training, Tactics, Techniques, and Procedures (T3Ps)**

The execution of any tactical convoy raises a host of issues for the convoy commander (CC). The CC must coordinate with the unit movement control center (UMCC) to ensure all levels of command are aware of the operation. Additionally, the CC must ensure the UMCC has contacted all potential adjacent units, and that those units are fully aware of the upcoming mission. The CC needs to also ensure convoy personnel are trained to work all communication equipment and are briefed on the communications protocol for the operation. The entire coordination effort

helps ensure execution, response, and completion of the convoy mission.

### **Detection**

Detection of an IED, VBIED, or ambush attack begins with the original analysis when planning the tactical convoy operation. The CC needs to conduct an examination of both the primary and alternate proposed routes to identify all potential choke points and attack areas. This analysis provides a baseline for the rest of the operational planning. Findings of the CC can then be confirmed or modified by the S-2 officer. The S-2 should have a detailed analysis of the threat along the MSR and a history of all attacks along the route. However, realistically the CC must remain cognizant that the enemy knows the local area and environment much better.

### **Prevention**

The key to preventing attacks is continual search and assessment during the conduct of any convoy. All members of the convoy must be trained to the highest level of readiness in order to counter any potential threats. CCs, vehicle drivers, and other convoy members must be thoroughly briefed on the latest enemy tactics, techniques, and procedures (TTP). They all must be aware of what dangers exist. A vehicle along the side of a road by itself, or the absence of locals along a route normally trafficked by families, can both be indications of potential threats.

### **Active Deterrence**

Placing personnel in the ring mounts of vehicles, maintaining an aggressive weapons posture, and executing offensive convoy driving are essential to prevent attacks. Employing enhanced observation equipment also increases the ability of the convoy to detect or deter an attack. All of these actions must be accomplished in accordance with established rules of engagement (ROE). The current ROE in Iraq prohibits personnel from pointing weapons at Iraqi civilians. This is an effort to enhance trust and confidence with the Iraqi populace; however, personnel should be aware that their convoy is being observed for any sign of weakness. In Iraq, small groups of young men will often observe convoys from along the sides of major MSRs. These groups pose no immediate threat to movement of the convoy, but it can be assumed these groups might be passing intelligence to insurgents. The seemingly contradictory goals of building Iraqi trust while

practicing strong force protection **can** be reconciled. For example, convoy personnel can offer friendly waves to these small groups and display their weapons, while at the same time, cover down a potential threat with an elevated muzzle. The desired end state is to clearly make potential attackers aware that they have been identified which in turn makes them imagine the potential cost of attacking the convoy.

### **Driver Actions**

It is vital for convoy drivers to execute aggressive driving procedures at all times. These include the following actions:

(1) The minimum and maximum interval between vehicles is 50-75 meters. Drivers should constantly speed up and slow down within this gap. This action is an effort to throw off the timing of any IED/VBIED triggerman. The 50-75 meter interval also allows the machine guns to maintain overlapping fields of fire while the convoy is on the move.

(2) When approaching an overpass, the first vehicle in the convoy should move either left or right and the next vehicle should go the opposite side. This helps counter the possibility of an IED thrown off the overpass and into the convoy.

(3) The last vehicle in the convoy must not allow any civilian vehicle to pass from behind. The rear gunner and driver do this through an escalation of force ROE.

### **Immediate Action Procedures**

#### **IED/VBIED Attacks**

IEDs and VBIEDs are the most common type of convoy attacks. They can happen anywhere and anytime. Actions immediately following one of these attacks can make the difference between life and death for any injured convoy personnel. Drills must be rehearsed until the individual responses of the personnel involved are automatically executed. These actions include:

**Signal the Alarm.** Standardized hand and arm signals or continuous short horn blasts should be used to notify of an attack if the attack has not been obvious to other convoy vehicles. Avoid using unsecured personnel radio communications. If tactically possible, the convoy should stop and take up defensive positions in the vicinity of the disabled vehicle. Security

---

**Actions immediately following one of these attacks can make the difference between life and death for any injured convoy personnel.**

---

# The Logistics Convoy: A Combat Operation



USA PHOTO BY CPT DANIEL T. ROSSI

by  
**CPT Daniel T. Rossi, USA**

Force protection is a basic tenet of Army operations; it is paramount to the success of every mission. The need for force protection is not specific to any one branch of the Army, yet the Army historically has directed most of its force protection efforts to traditional combat operations. To ensure mission success on today's battlefield, Army logisticians require a greater level of protection due to the increased threat against convoy operations.

Current operations on a noncontiguous battlefield highlight the enemy's overwhelming trend to attack perceived "soft" logistics nodes. In particular, convoys can be the targets of choice due to an inherent inability to provide adequate force protection to deter and defend against asymmetrical threats. Logistics units often rely on outside augmentation from maneuver and military police (MP) sources to provide convoy security. This relationship strains the forces providing security and often

hampers combat operations by committing scarce security assets and can slow the throughput of supplies. Logistics convoys might wait several hours at a location for its security escorts, only to learn that MPs were redirected at the last minute to a "higher-priority" mission or were waiting at a different location. Now the convoy misses their start point time and is forced to make other security arrangements. This scenario reflects the Army's challenge to view logistics functions as a warfighting operation.

Although the Army continuously seeks to improve its fighting capabilities via after-action reviews and improved tactics, techniques, and procedures (TTP), convoy operations are new to these specific efforts. To protect soldiers and supplies, some commanders in Iraq have resurrected a tactic effective in repelling enemy attacks during the Vietnam War—the construction of gun trucks. My experience with the 548th Corps Support Battalion, 10th Mountain Division (Light Infantry), from Fort Drum, New York, while supporting the 101st Airborne Division (Air Assault) in Operation Iraqi Freedom

---

**By building their own gun trucks, soldiers of the 548th Corps Support Battalion minimized their needs for external unit security.**

---

---

**Logistics units conduct daily combat operations in the form of resupply, retrograde, and recovery convoys. The key maneuver elements in these scenarios are gun trucks.**

---

(OIF) from May 2003 to March 2004, underscored the need for organic force protection assets in a logistics operation.

### **Improvised Explosive Device (IED) Threats**

IEDs pose the greatest threat to convoys in Iraq. By their nature, IEDs are simple to make, easy to employ, and offer the least risk of exposure for enemy forces. Early in OIF, IEDs were less effective due to their lack of both sophistication and explosive power. As enemy insurgents became more determined, the lethality of IEDs also increased. As our battalion witnessed a sharp increase in the use and power of IEDs, we improvised and adapted to overcome their threat. The initial countermeasure was to place sandbags on the floorboards and beds of vehicles to help absorb the impact of an IED blast. This method proved very effective and is credited with saving several soldiers lives. Later in our deployment, the 101<sup>st</sup> Air Assault Division hired a metal works plant in the northern Iraqi city of Mosul to produce ballistic hardened steel plates that were bolted to the undercarriages of our High-Mobility, Multipurpose, Wheeled Vehicles (HMMWVs). This technique offered a much greater level of blast protection than sandbags alone. A second measure was to adapt our TTPs when encountering a suspect IED. Drivers were instructed to prohibit civilian vehicles from approaching the convoy due to the vehicle-borne IED (VBIED) threat and not to travel in the same lane, but rather vary between lanes whenever possible. Also, when encountering a suspected IED, we were to stop at a safe distance to prevent other coalition forces from entering the suspected danger zone. We then contacted an explosive ordnance disposal (EOD) unit to inquire if they were available to deactivate the device. If the IED remained unexploded, it was important to keep it intact so experienced EOD technicians could examine it in an attempt to gain valuable intelligence regarding its construction. This intelligence can then be shared throughout the theater for future counter-IED operations. The third and most effective counter-IED measure was intelligence operations. Since the enemy was adapting quickly, it was a requirement that before departure, each convoy received an intelligence brief from the battalion intelligence or operations officer

describing emerging IED trends. Daily intelligence briefs reflected the latest enemy IED TTPs, as well as suspected emplacement locations. Soldiers were keenly aware that nearly any object was a potential IED. Animal carcasses, cardboard boxes, disabled vehicles, or a simple rock on the side of the road could all conceal an IED. Engineers from the 4<sup>th</sup> Infantry Division played a major role in combating the IED threat. One such counter-IED operation included clearing trees, brush, trash, and other obstacles between divided highways that coalition forces used as main supply routes. This major effort involved clearing hundreds of miles of roads, but when completed, it left little cover from which enemy insurgents could conceal IEDs or launch attacks.

### **Adapt and Overcome**

Logistics units conduct daily combat operations in the form of resupply, retrograde, and recovery convoys. The key maneuver elements in these scenarios are gun trucks. Combining the ingenuity and abilities of the 548th Corps Support Battalion with the experience of several Vietnam-experienced Army National Guardsmen, we were able to construct twelve 5-ton gun trucks from materials we either found locally, brought with us, or fabricated in-country.

The most effective gun trucks were made using discarded Russian infantry fighting vehicle armor plates found in an Iraqi supply warehouse in Taji. These plates were welded to the sides of 5-ton trucks to provide protection against small-arms fire and shrapnel from IEDs. Crew-served weapon mounts were positioned in the beds of these trucks and ring mounts were installed in the cabs to support the firepower needed to deter and defend against attacks.

Armor plates were welded into a box configuration and crew-served gun mounts were attached to each side. This configuration provided a 360-degree overlapping field of fire. This armored box could be lifted by a 5-ton wrecker or a 10,000-pound forklift and moved from one vehicle to another to expand versatility.

With the advent of gun trucks, our battalion was no longer as heavily dependent on outside units for security.

See Logistics page 17

# Convoy Survives Ambush in Iraq



USA PHOTO BY SFC JOHAN CHARLES VAN BOERS

by  
**MSgt Chuck Roberts**  
Air National Guard

As the convoy approached Mosul, an Iraqi man looked toward TSgt Bob Busse and slid his hand across his throat.

A short while later, the assemblage of about 70 gun trucks, armored Stryker vehicles, tractor trailers, and heavy equipment transporters entered a section of Mosul that only a few days prior was the scene of a bustling outdoor market.

On this day, however, "It was eerily quiet," said TSgt Robert Weis, who viewed the abandoned setting from the driver's seat of a 5-ton Air Force gun truck. "We looked at each other and said, 'This is not good.'"

## The Ambush Begins

The voice of the convoy commander came across the radio, "This is where we've been hit before."

"When he said that, he might as well have hit the button to start the attack," said SSgt Bill Halstead, a gun truck commander in the next-to-last vehicle. Two vehicles at the front of the convoy were suddenly disabled by an improvised explosive device and were blocking the road. The convoy came to a halt, with its maneuverability severely restricted by steep curbs on both sides of the road.

From Sergeant Busse's position about three-quarters of the way toward the end of the convoy, the ensuing melee began with a few shots that sounded like firecrackers. "Then all hell broke loose," said Sergeant Busse, who saw the trail of

a rocket propelled grenade streak above his truck, quickly followed by the sound of a large explosion. From his .50-caliber gun box on top of the truck, TSgt Michael Mauro witnessed a swarm of Iraqi insurgents suddenly appear from alleyways, rooftops, and windows of two- and three-story buildings on both sides of the road.

"It was a well set up ambush," Sergeant Weis said.

From every direction came a barrage of RPGs, Molotov cocktails, mortars, and the hissing of bullets whizzing by from AK-47 assault rifles. Sergeant Busse saw an Airman in the gun box in front of him take a shot to the leg. Sergeant Mauro aimed his .50-cal toward a window where he spied two silhouettes and opened up with a short burst of rounds toward them while yelling, "Let's get out of here!"

Then, realizing the power of his .50-caliber, Sergeant Mauro contained his fire to minimize the shrapnel effect caused by bullets penetrating the walls of nearby buildings, sending cement debris back toward the vehicles.

"I was never so scared in my life," Sergeant Mauro said of the moment.

"We were just shooting at silhouettes in every window and rooftop," said Sergeant Weis.

"Am I ever going to get out of it," Sergeant Mauro recalled thinking. "It was crazy. It was crazy. It was crazy."

"All I remember is shooting to the left and to the right," Sergeant Busse said. "It was like a blur. I saw no faces."

Time seemed to slow down. The noise of battle seemed muted, and the scene before them appeared foggy, or as if viewed through a fish bowl.

## Surviving the Chokepoint

The convoy began to slowly move forward again, but that was a small consolation when they realized what they were approaching. It was a chokepoint where passing vehicles were bearing the brunt of intense enemy fire.

As they approached the chokepoint, he felt like he was waiting in line at an amusement park. "It was like being on a Disneyland ride. 'OK, guys, now it's your turn to go through the gauntlet.'

Sergeant Weis remembers a "fight or

"It was a well set up ambush,"  
Sergeant Weis said.

It was a chokepoint where passing vehicles were bearing the brunt of intense enemy fire.

flight" sensation as they drew closer to the chokepoint and described the feeling of being on a bizarre type of carnival ride he didn't want to be on but couldn't get off.

Just as they entered the chokepoint, Sergeant Halstead said, "This is it," and switched his M-16 from single fire to automatic to lay down a suppressing fire. As they entered the worst of it, he looked up to check his gunner who was firing his weapon up at the same time."

### Saving a Soldier

Once safely through the chokepoint, Sergeant Weis approached the burning vehicles and navigated past them. He soon approached a tractor-trailer barely moving. Unable to pass it on the narrow street, he finally managed to pull beside it and yelled, "Are you all right?" "I'm hit, I'm hit," said a female Soldier barely able to steer after a bullet struck her in the left shoulder.

As heavy insurgent fire continued from both sides of the road, Sergeant Weis managed to maneuver his truck close enough beside the wounded Soldier so that Sergeant Busse could grab her and switch positions in their respective trucks while Sergeant Mauro continued to lay down suppressing fire from above with his .50-caliber.

As Sergeant Busse entered the tractor trailer, the truck commander was firing out the passenger window. Sergeant Busse quickly put the truck in gear and "got out of town."

Soon the convoy was exiting the worst of the violence and at about the same time began receiving fire support from an Iraqi National Guard unit. Then they were safe within the confines of Camp Diamondback where the Soldier was treated for a minor bullet wound.

The fight had lasted about 40 minutes, but it seemed as if only a few minutes had passed, they said. Almost miraculously, only a few Airmen and Soldiers received minor injuries, while enemy losses were reported at 48 dead, 22 wounded, and 15 detained.

§ § § § § § § §

This article was submitted by MSgt Phil Coolberth, Superintendent, Basic Combat Convoy Course, Camp Bullis TX.

The following tactics, techniques, and procedures (TTP) taught at Camp Bullis allowed sergeants Busse, Halstead, Mauro, and Weiss to react quickly to the

threat imposed from insurgents.

**—Train in the environment you are going to fight.** Camp Bullis' temperature and desert-like conditions provide students with comparable weather and terrain conditions to Iraq. Additionally, the convoy vehicles used closely represent the vehicles driven in Iraq; noisy cabs with no air conditioning and austere interiors. Additionally, if convoy operations are performed mostly in the darkness, Camp Bullis trains during the same hours.

**—Adjust battle drills to reflect actual operations.** Over 40 percent of the instructors at Camp Bullis are veteran convoy operators, returning from Iraq. This provides students with realistic training coupled with instant credibility. After these veterans instruct a course, they return to their home base, providing the latest TTP in local training.

**—Weapons employment.** Camp Bullis' maneuver areas are replete with firing ranges, allowing students to train as they will fight. Students train on every weapon used in Iraq, becoming acclimated to each weapons' specific characteristics. Drill scenarios are patterned from actual situations encountered in Iraq.

**—Vehicle-borne improvised explosive devices.** New TTPs were introduced into Camp Bullis' training program to reflect current threats in theater. Students train on the appropriate TTPs to mitigate the dangers associated with improvised explosive devices attached to moving and/or abandoned vehicles.

The four Air National Guardsmen in this story were deployed to Iraq for eight months in 2004 with the 1058th Aerospace Expeditionary Transportation Company at Camp Speicher near Tikrit. Their mission was to provide security for military and civilian convoys. Their home unit is the 106th Rescue Wing at Westhampton Beach, NY.

The 4 August attack in this story was but one of several they encountered in Iraq, but it was the most dangerous. As a result, Sergeants Busse, Mauro, and Weis were nominated for the Army Commendation Medal with valor. Their company received 18 Purple Hearts.

# JSTARS Support of Convoy Operations



USAF PHOTO BY SSGT SHANE CUOMO

by

**Maj Eric "Wood" Moses, USAF,  
116 ACW**

**Maj John "Greek" Grivakis, USAF,  
ALSA Center**

Convoy operations throughout the Iraqi theater are crucial to the support of coalition warfighters. Since the fall of 2003, Joint Surveillance Target Attack Radar System (JSTARS) crews have played an integral part in Operation Iraqi Freedom (OIF) convoy operations. The JSTARS contingent flies multiple sorties every day in support of convoy operations. Highly trained JSTARS operators participate in everything from route selection and security to emergency evacuation of injured personnel.

JSTARS is a "system of systems" consisting of both airborne- and ground-based segments. It is an E-8C aircraft (militarized Boeing 707-300) with an airborne radar and associated subsystems interoperable with other joint systems. The ground-based segment consists of the Army and Marine Corps common ground station (CGS) and the joint Services

workstation (JSWS) which have the ability to receive radar information from the E-8C, exchanging freetext messages to and from the aircraft. The E-8C contains a 24-foot phased array radar on the bottom of the fuselage capable of providing moving target indicator (MTI) and synthetic aperture radar (SAR) data over an army corps-sized area. MTI can detect vehicle-sized objects operating within the E-8C coverage while SAR provides a "radar picture" of the ground terrain in the area of interest. Combined with a suite of ultrahigh frequency (UHF), very high frequency (VHF), and satellite communications (SATCOM) radios, JSTARS is an extremely capable battle management platform, supporting a wide variety of Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) operations.

JSTARS operators and planners have consistently devised new ways to assist with counterinsurgency operations in Iraq, providing route updates to convoys via a common radio frequency. Ground elements use this same common frequency to obtain assistance from JSTARS, ranging from monitoring route

status, locating lost elements, relaying improvised explosive device (IED) locations to reporting wounded troops, requesting medical evacuation, and reporting troops in contact with the enemy.

In addition, JSTARS coordinates with the air support operations center (ASOC) and Army aviation units and provides support for route security and safety. For example, when an IED is reported to JSTARS, an additional spotlight radar with a quicker revisit and update rate is dedicated to the area of interest, searching for any vehicles leaving the area. If troops report enemy contact, JSTARS will coordinate with the ASOC and request fixed-wing or rotary-wing support for the engagement. If personnel injuries require medical evacuation, JSTARS will contact the nearest medical evacuation unit and request a scramble to support the mission.

An example of JSTARS interoperability with ground operations recently occurred in OIF. JSTARS received an intelligence report from the combat air operations center (CAOC) regarding the possibility of a future mortar attack. JSTARS implemented a MTI radar sector over the area of interest. Minutes later, a convoy support element reported they were under attack by mortar fire near the JSTARS surveillance area. Using the MTI, JSTARS operators detected and tracked a single enemy "mover" exiting the area. They alerted the ASOC and received a set of fighter aircraft to track and target the mover. In addition, a Ground Forward Air Controller (GFAC) in the area checked in with JSTARS. JSTARS controllers on board the aircraft vectored both the ground unit and the fighters to the enemy "mover." The GFAC and the aircraft acquired "eyes-on" the enemy "mover," tracking it until it stopped and the occupants exited the vehicle and entered a house. Coordinates of the house were then passed to the CAOC and intelligence agencies for additional processing and action.

To effectively support convoy operations, JSTARS operators require detailed information from ground elements

containing planned routes, number of convoy elements, communication call signs, and route security arrangements. In addition, ground units can request MTI radar coverage for specific areas of interest along a planned route. JSTARS is capable of providing assistance to convoys while simultaneously completing other C2ISR taskings. However, as a high demand low density asset, JSTARS mission tasking is prioritized and managed by the CAOC. The ISR Division (ISRD) within the CAOC receives inputs from ground units throughout Iraq and coordinates with the Army Analysis and Control Element (ACE) and Marine Corps collection personnel. Ground units must prioritize all requests prior to sending them to the ISRD and must be specific in the areas they wish to observe. JSTARS can detect, track, and report any ground movers within its radar field-of-view based on orbit and coverage area.

Ground requesters must inform JSTARS of how, what, and when to detect, track, and report. These requests should be in accordance with any Priority Intelligence Requirements laid out by ground command elements.

JSTARS remains an integral part of OIF and continues to adjust and improve operating procedures for a non-linear battlefield. It serves as a force multiplier by directing air power, assisting ground fires, and detecting enemy movement. In addition, ground personnel are able to receive critical ground surveillance information from JSTARS through a CGS or JSWS. JSTARS provides vital C2 support to convoys, as well as ISR information to other ground combat units. Army and Marine Corps ground troops should become familiar with the extensive capabilities of JSTARS to enhance their situational awareness with timely, accurate, and vital battlefield intelligence.

---

JSTARS controllers  
on board the  
aircraft vectored  
both the ground unit  
and the fighters to  
the enemy "mover."

---

development and assessment include the Army Training and Doctrine Command, Marine Corps Combat Development Command, Air Force Doctrine Center, and the Navy Warfare Development Command.

Currently ALSA has a full workload of over 27 publications that are in various stages of development, assessment, and revision. The past year generated critical MTTPs such as *Time Sensitive Targeting (TST)*, *Kill Box*, *Detainee Operations*, and *Tactical Convoy Operations*. *Tactical Convoy Operations* was completed in only 6 months under ALSA's "fast track" developmental process and has set a record for initial distribution to all Services of over 55,000 cargo pocket-sized, weather-proofed manuals.

As ALSA turns 30 years old in June of this year the US has been fighting in Iraq for over 2 years and even longer in Afghanistan. Current operations, Service transformation, new equipment acquisitions, new strategies for fighting our nations wars and new technology integration into weapon systems have provided ALSA with a fertile ground of

interoperability challenges to address. But the more things change, the more they stay the same. The challenges of the past, such as air-ground coordination, coalition operations in Europe, emerging precision-guided weapons and global positioning system (GPS), command and control in a joint and coalition environment, and many other areas that were of concern then all sound very familiar today, 30 years later.

Looking to the future, ALSA will likely focus on the following areas: impact of Army transformation, effects-based operations, unmanned aerial vehicle (UAV) integration, special operations forces (SOF) integration, homeland defense, and space and missile defense. ALSA's effectiveness as an organization is driven by its close association with the Service doctrine centers, US Special Operations Command (USSOCOM), USJFCOM, and the Joint Staff (J-7). The ALSA Center is one of many DOD organizations trying to meet the immediate needs of deployed warfighters. ALSA's independence and unmatched responsiveness has kept it a viable contributing organization that continues to support the Services and serves as a model multi-Service organization. 

---

...the more things  
change, the more  
they stay the same.

The challenges of  
the past...and many  
other areas that  
were of concern  
then all sound very  
familiar today, 30  
years later.

---



## **IED from page 8**

teams should dismount and take up a full 360 degree security posture around the convoy. The CC should ensure that automatic weapons are positioned to cover movements of the security team.

**Security Teams.** Security teams would then sweep and clear 300 meters from the detonation in all directions. These actions should be rehearsed in detail. Security teams need to be alert for any secondary IEDs, ambush, or indications of continued planned attacks.

**Casualties.** Any wounded personnel would be triaged by medical personnel and evacuated using the predesignated casualty evacuation vehicle.

**Vehicles.** Vehicles and equipment should be salvaged if possible. The stripping of vehicles must also be rehearsed in order to ensure sensitive equipment can be salvaged in a limited amount of time. Salvageable US or coalition vehicles and equipment should not be abandoned.

**Mission Report.** Finally, the CC must report the situation to higher authority and give an estimate of the ability to complete the convoy's assigned mission.

No list of immediate action procedures can be all encompassing, but those listed above give a baseline for creating T3Ps for countering IED or VBIED attacks.

### **Complex Ambush**

One of the most dangerous types of attacks is the many variations of a complex ambush. An IED, VBIED, or rocket-propelled grenade strike can initiate the attack. The enemy can also establish a road block in an effort to make the convoy slow or stop, making it an easier target. What makes an ambush so dangerous is that the enemy has conducted some level of deliberate planning to ensure the most effective execution. Enemy desired end state could include the killing or capture of US or coalition personnel, as well as the destruction of vehicles and equipment. Execution of proper immediate actions following an ambush is essential. They include:

**Signal the Alarm.** Predesignated

horn blasts or hand and arm signals should be made, followed by smoke thrown to the ambush side.

**Vehicles.** Vehicles caught in the ambush kill zone must continue to move on until they have exited the zone or come to the edge of a defilade area from which they can return fire on target. This fire includes both individual and crew-served weapon systems. Vehicles that have not yet entered the kill zone should stop short if possible and take up a herringbone position. They should also return fire on target with any available weapons. Vehicles caught in the kill zone should also return fire if possible. The desired end state is rounds on the target area. Depending on the situation, security forces should dismount and engage enemy positions. Any armored escort vehicles should find positions from which to return suppressive fire and support the maneuver of security forces. Their end goal is to maneuver, close, engage, and fire to destroy the enemy. As fire effects on the target are observed, vehicles in the kill zone should upon order move out of the kill zone. This order for movement will likely come from either the security force commander or the CC. Communications between automatic weapon gunners and convoy leadership is essential.

### **Conclusion**

Conducting tactical convoy operations in an asymmetrical environment requires planners to execute operations with full consideration towards the entire spectrum of warfare. Combat convoys face a host of constant challenges, ranging from multiple IED and VBIED threats, to complex ambushes and persistent insurgents. US and coalition T3Ps for executing these involved operations must continue to adjust in order to counter an evolving enemy threat.

Currently Captain Warfield is a student at the Expeditionary Warfare School. He is a former Assistant Logistics Officer and Motor Transport Officer with the Regimental Combat Team-7, 1st Marine Division.

Of the eight companies assigned to the battalion, three were transportation. They conducted daily convoys and were able to provide their own security. Other gun trucks provided security for recovery and ad hoc missions. Since these gun trucks were organic to our logistics unit, their operational effectiveness was optimized.

#### **Gun Truck ‘Specs’**

The most effective gun truck is a 2.5-ton or larger vehicle that can maintain convoy speeds. It had to be hardened with armor plates to withstand small arms fire and have at least one mounted crew-served weapon (7.62 millimeters or larger). HMMWV gun trucks were often used due to the unavailability of larger trucks for refit.

HMMWV gun trucks worked well in convoys of similar type vehicles and as command and control platforms, but larger gun trucks had additional benefits. Armored 5-ton vehicles with mounted crew-served weapons seemed to discourage would-be attackers simply by their sheer size. The larger size of these vehicles also offered the crew a better field of vision and permitted them to move about more freely in the truck beds. The additional height of the 5-ton vehicles also afforded better security for crowd control and protection from looters and attackers attempting to reach into vehicles or toss grenades into the trucks. Larger gun trucks were also better able to withstand IED attacks, since they had a higher ground clearance than the lower-riding HMMWVs.

#### **Force Protection**

The lack of gun trucks in a combat service support unit can have significant drawbacks. Without an organic gun truck, convoy security must be provided by external units. If unit assets are required to be converted into gun trucks, internal overall unit lift capability is decreased accordingly. Relying on external units for security proportionally causes dedicated combat forces to be diverted to missions other than engaging the enemy.

Convoy battle drills need to be well rehearsed so each soldier understands the

actions required upon enemy contact or a suspected IED encounter. External security assets do not normally train with the convoys they might be protecting. The resulting lack of cohesiveness can create a dangerous combat environment. To be effective in suppressing an enemy threat and preventing fratricide, soldiers must be very familiar with TTP and know automatically how they and their fellow soldiers will react.

The Army is committed to its soldiers and provides the best protection and equipment available. While small arms protective inserts and up-armored HMMWVs are critical for combat units, a requisite level of security, including the addition of gun trucks, remains essential for convoys.

The enemy continues to adapt their TTPs for waging attacks that threaten the full spectrum of Army operations. Convoys are faced with evolving threats every day. Convoy operations are combat operations, especially those that traverse nonsecure lines of communication (LOCs) between joint operations areas. Logistics units are part of the greater Army, and they are integral to the success of maneuver force operations. Success of convoy operations is vital and directly related to the success of the Army’s greater combat goals.

Adding organic gun trucks to logistical units enhances the overall capabilities of combat logisticians to provide an uninterrupted flow of crucial supplies to combat arms forces and helps ensure continued success on the battlefield.

---

Logistics units are part of the greater Army, and they are integral to the success of maneuver force operations.

---

CPT Rossi is a combat developer assigned to the Directorate of Combat Developments for Combat Service Support at the Army Combined Arms Support Command at Fort Lee, Virginia. He previously served in the 548th Corps Support Battalion, 10th Mountain Division (Light Infantry), which provided support to the 101st Airborne Division (Air Assault) during its deployment to Iraq. This article originally appeared in *Army Logistician* and was edited by CPT Rossi for the ALSA Center.

## ALSA PROJECTS UPDATE

### CURRENT ALSA PUBLICATIONS

<b>TITLE</b>	<b>DATE</b>	<b>PUB #</b>	<b>DESCRIPTION</b>
<b>ADUS: MTTP for AIR DEFENSE of the United States</b> <b>Classified SECRET/RELCAN</b>	22 MAR 04	FM 3-01.1 NTTP 3-26.1.1 AFTTP(I) 3-2.50	Supports planners, warfighters, and interagency personnel participating in air defense of the US by providing planning, coordination, and execution information. Pub is primarily focused at the tactical level. Includes Operation Noble Eagle and Clear Skies Exercise lessons learned. <b>Current Status:</b> Assess 1 Sep 05 (18mo) Revise 1 Mar 07 (3yr) <b>POC:</b> Team E <a href="mailto:alsae@langley.af.mil">alsae@langley.af.mil</a>
<b>AMCI: Army and Marine Corps Integration in Joint Operations</b> <b>Approved for Public Release</b>	21 NOV 01 <b>Transitioned to Army Nov 04</b>	FM 3-31.1 (FM 90-31) MCWP 3-36	Describes the capabilities and limitations of selected Army and Marine Corps organizations and provides TTP for the integrated employment of these units in joint operations. The example used is C2 of a notional Army Brigade by a MEF or C2 of a MEB by an Army Corps. <b>Current Status:</b> Transitioned 1 Nov 04 (3yr) (New POC is CAC/CADD, Ft. Leavenworth) <b>ALSA transition POC:</b> Team F <a href="mailto:alsaf@langley.af.mil">alsaf@langley.af.mil</a>
<b>AVIATION URBAN OPERATIONS: Multiservice Tactics, Techniques, and Procedures for Aviation Urban Operations</b> <b>Distribution Restricted</b>	15 APR 01	FM 3-06.1 (FM 1-130) MCRP 3-35.3A NTTP 3-01.04 AFTTP(I) 3-2.29	Provides MTTP for tactical-level planning and execution of fixed- and rotary-wing aviation urban operations. <b>Current Status:</b> Active. Expect Signature Draft 1 May 05. <b>POC:</b> Team E <a href="mailto:alsae@langley.af.mil">alsae@langley.af.mil</a>
<b>BREVITY: Multi-Service Brevity Codes</b> <b>Distribution Restricted</b>	5 JUN 03	FM 3-54.10 (FM 3-97.18) MCRP 3-25B NTTP 6-02.1 AFTTP(I) 3-2.5	Is a dictionary of multi-Service use brevity codes to augment JP 1-02, DOD Dictionary of Military and Associated Terms. This pub standardizes air-to-air, air-to-surface, surface-to-air, and surface-to-surface brevity code words in multi-Service operations. <b>Current Status:</b> Active. Adjudication of Worldwide Review <b>POC:</b> Team F <a href="mailto:alsaf@langley.af.mil">alsaf@langley.af.mil</a>
<b>COMCAM: Multi-Service Tactics, Techniques, and Procedures for Joint Combat Camera Operations</b> <b>Approved for Public Release</b>	15 MAR 03	FM 3-55.12 MCRP 3-33.7A NTTP 3-13.12 AFTTP(I) 3-2.41	Fills the void that exists regarding combat camera doctrine, and assists JTF commanders in structuring and employing combat camera assets as an effective operational planning tool. <b>Current Status:</b> Assess 1 Sep 04 (18mo) Revise 1 Mar 06 (3yr) <b>POC:</b> Team C <a href="mailto:alsac@langley.af.mil">alsac@langley.af.mil</a>
<b>EOD: Multi-Service Procedures for Explosive Ordnance Disposal in a Joint Environment</b> <b>Approved for Public Release</b>	15 FEB 01	FM 4-30.16 MCRP 3-17.2C NTTP 3-02.5 AFTTP(I) 3-2.32	Provides guidance and procedures for the employment of a joint explosive ordnance disposal (EOD) force. The manual assists commanders and planners in understanding the EOD capabilities of each Service. <b>Current Status:</b> Active. FCD due to ALSA 1 Jul 05. <b>POC:</b> Team B <a href="mailto:alsab@langley.af.mil">alsab@langley.af.mil</a>
<b>HAVE QUICK: Multi Service Communications procedures for the Have Quick Radio System</b> <b>Distribution Restricted</b>	MAY 04	FM 6-02.771 MCRP 3-40.3F NTTP 6-02.7 AFTTP(I) 3-2.49	Simplifies planning and coordination of HAVE QUICK radio procedures and responds to the lack of HAVE QUICK TTP throughout the Services. Additionally, it provides operators information on multi-Service HAVE QUICK communication systems while conducting home station training or in preparation for interoperability training. <b>Current Status:</b> Assess 1 Nov 05 (18 mo) Revise 1 May 07 (3yr) <b>POC TEAM C:</b> <a href="mailto:alsac@langley.af.mil">alsac@langley.af.mil</a>
<b>HF-ALE: Multi-Service Tactics, Techniques, and Procedures for the High Frequency-Automatic Link Establishment (HF-ALE) Radios</b> <b>Approved for Public Release</b>	1 SEP 03	FM 6-02.74 MCRP 3-40.3E NTTP 6-02.6 AFTTP(I) 3-2.48	Standardizes high power and low power HF-ALE operations across the Services and enable joint forces to use HF radio as a supplement / alternative to overburdened SATCOM systems for over-the-horizon communications. <b>Current Status:</b> Assess 1 Mar 05 (18mo) Revise 1 Sep 06 (3yr) <b>POC TEAM C:</b> <a href="mailto:alsac@langley.af.mil">alsac@langley.af.mil</a>
<b>ICAC2: Multi-Service Procedures for Integrated Combat Airspace Command and Control</b> <b>Approved for Public Release</b>	30 JUN 00 <b>Retain until TAGS revision</b>	FM 3-52.1 (FM 100-103-1) MCRP 3-25D NTTP 3-52.1(Rev A) AFTTP(I) 3-2.16	Provides detailed TTP for airspace C2 to include specialized missions not covered in JP 3-52, Doctrine for Joint Airspace Control in a Combat Zone. Includes specific information on interfaces and communications required to support integrated airspace control in a multiservice environment. <b>Current Status:</b> At Nov 04 JASC, Services agreed to retain ICAC2 until TAGS is assessed in May 05. <b>POC:</b> Team D <a href="mailto:alsad@langley.af.mil">alsad@langley.af.mil</a>

**ALSA PROJECTS UPDATE**  
**CURRENT ALSA PUBLICATIONS**

TITLE	DATE	PUB #	DESCRIPTION
<b>IADS:</b> Multi-Service Tactics, Techniques, and Procedures for an Integrated Air Defense System(IADS) <b>Distribution Restricted</b>	30 OCT 04	FM 3-01.15 MCRP 3-25E NTTP 3-01.8 AFTTP(I) 3-2.31	Provides joint planners with a consolidated reference on Service air defense systems, processes, and structures, to include integration procedures. <b>Current Status:</b> Assess 1 Jan 06 (18 mo) Revise 30 Oct 07 (3 yr) <b>POC:</b> Team D <a href="mailto:alsad@langley.af.mil">alsad@langley.af.mil</a>
<b>IDM:</b> Multi-Service Tactics, Techniques, and Procedures for the Improved Data Modem Integration <b>Distribution Restricted</b>	30 MAY 03	FM 6-02.76 MCRP 3-25G NTTP 6-02.3 AFTTP(I) 3-2.38	Provides digital connectivity to a variety of attack and reconnaissance aircraft; facilitates exchange of near-real-time targeting data and improves tactical situational awareness by providing a concise picture of the multi-dimensional battlefield. <b>Current Status:</b> Assess 1 Nov 04 (18mo); Revise 1 May 06 (3yr) <b>POC:</b> Team C <a href="mailto:alsac@langley.af.mil">alsac@langley.af.mil</a>
<b>IFF:</b> MTTP for Mk XII Mode 4 Security Issues in a Joint Integrated Air Defense System <b>Classified SECRET</b>	11 DEC 03	FM 3-01.61 MCWP 3-25.11 NTTP 6-02.4 AFTTP(I) 3-2.39	Educes the warfighter to security issues associated with using the Mark XII IFF Mode 4 Combat Identification System in a joint integrated air defense environment. It captures TTP used today by the warfighter that can address those security issues. <b>Current Status:</b> Assess 1 Jun 05 (18mo); Revise 1 Dec 06 (3yr) <b>POC:</b> Team A <a href="mailto:alsaa@langley.af.mil">alsaa@langley.af.mil</a>
<b>JAOC / AAMDC:</b> Multi-Service Tactics, Techniques, and Procedures for Joint Air Operations Center and Army Air and Missile Defense Command Coordination <b>Distribution Restricted</b>	22 Mar 04	FM 3-01.20 AFTTP(I) 3-2.30	Addresses coordination requirements between the Joint Air Operations Center and the Army Air and Missile Defense Command. Assists the JFC, JFACC, and their staffs in developing a coherent approach to planning and execution of AMD operations. <b>Current Status:</b> Assess 1 Sep 05 (18mo); Revise 1 Mar 07 (3yr) <b>POC:</b> Team D <a href="mailto:alsad@langley.af.mil">alsad@langley.af.mil</a>
<b>JATC:</b> Multi-Service Procedures for Joint Air Traffic Control <b>Distribution Restricted</b>	17 JUL 03	FM 3-52.3 (FM 100-104) MCRP 3-25A NTTP 3-56.3 AFTTP(I) 3-2.23	Is a ready reference source for guidance on ATC responsibilities, procedures, and employment in a joint environment. Discusses JATC employment and Service relationships for initial, transition, and sustained ATC operations across the spectrum of joint operations within the theater or area of responsibility (AOR). <b>Current Status:</b> Assess 1 Jan 05 (18mo) Revise 1 Jul 06 (3yr) <b>POC:</b> Team F <a href="mailto:alsaf@langley.af.mil">alsaf@langley.af.mil</a>
<b>JFIRE:</b> Multiservice Procedures for the Joint Application of Firepower(JFIRE) <b>Distribution Restricted</b>	30 OCT 04	FM 3-09.32 MCRP 3-16.6A NTTP 3-09.2 AFTTP(I) 3-2.6	Is a pocketsize guide of procedures for calls for fire, CAS, and naval gunfire. Provides tactics for joint operations between attack helicopters and fixed-wing aircraft performing integrated battlefield operations. <b>Current Status:</b> Assess 1 Jan 06 (18 mo) Revise 30 Oct 07 (3 yr) <b>POC:</b> Team A <a href="mailto:alsaa@langley.af..mil">alsaa@langley.af..mil</a>
<b>JSEAD/ARM-J:</b> Multi Service Tactics, Techniques, and Procedures for the Suppression of Enemy Air Defenses in a Joint Environment <b>Classified SECRET</b>	28 May 04	FM 3-01.4 MCRP 3-22.2A NTTP 3-01.42 AFTTP(I) 3-2.28	Fills a planning and employment void not captured in existing Joint Tactics Techniques and Procedures. It contributes to Service interoperability by providing the JTF and subordinate commanders, their staffs, and SEAD operators a single, consolidated reference. Additionally, this publication discusses the employment of intelligence, surveillance, and reconnaissance assets, electronic and destructive attack weapons systems to destroy/disrupt/degrade the enemy's air defenses. It also incorporates appropriate anti-radiation missile information. <b>Current Status:</b> Assess 1 Nov 05 (18 mo) Revise 1 May 07 (3yr) <b>POC:</b> Team A <a href="mailto:alsaa@langley.af..mil">alsaa@langley.af..mil</a>
<b>JSTARS:</b> Multi-Service Tactics, Techniques, and Procedures for the Joint Surveillance Target Attack Radar System <b>Distribution Restricted</b>	17 MAR 03	FM 3-55.6 (FM 90-37) MCRP 2-1E NTTP 3-55.13 (Rev A) AFTTP(I) 3-2.2	Provides procedures for the employment of the Joint Surveillance Target Attack Radar System (JSTARS) in dedicated support to the JFC. Revision will be unclassified. The unclassified revision describes multi-Service TTP for consideration and use during planning and employment of the JSTARS. <b>Current Status:</b> Assessed "retain at ALSA" Revise 1 Mar 06 (3yr) <b>POC:</b> Team D <a href="mailto:alsad@langley.af.mil">alsad@langley.af.mil</a>
<b>JTF IM:</b> Multiservice Tactics, Techniques, and Procedures for Joint Task Force Information Management <b>Distribution Restricted</b>	10 SEP 03	FM 6-02.85 (FM 101-4) MCRP 3-40.2A NTTP 3-13.1.16 AFTTP(I) 3-2.22	Describes how to manage, control, and protect information in a JTF headquarters conducting continuous operations. <b>Current Status:</b> Assess 1 Mar 05 (18mo) Revise 1 Sep 06 (3yr) <b>POC:</b> Team C <a href="mailto:alsac@langley.af.mil">alsac@langley.af.mil</a>

## ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS

<b>TITLE</b>	<b>DATE</b>	<b>PUB #</b>	<b>DESCRIPTION</b>
<b>JTF LNO Integration: Multiservice Tactics, Techniques, And Procedures For Joint Task Force (JTF) Liaison Officer Integration</b> <b>Distribution Restricted</b>	27 JAN 03	FM 5-01.12 (FM 90-41) MCRP 5-1.B NTTP 5-02 AFTTP(I) 3-2.21	Defines liaison functions and responsibilities associated with operating a JTF. <b>Current Status:</b> Assess 1 Jun 05 (18 mo) Revise 1 Jan 06 <b>POC:</b> Team G <a href="mailto:alsag@langley.af.mil">alsag@langley.af.mil</a>
<b>JTMTD: Multiservice Procedures for Joint Theater Missile Target Development</b> <b>Distribution Restricted</b>	11 Nov 03	FM 3-01.51 (FM 90-43) NTTP 3-01.13 AFTTP(I) 3-2.24	Documents TTPs for threat missile target development in early entry and mature theater operations. It provides a common understanding of the threat missile target set and information on the component elements involved in target development and attack operations. <b>Current Status:</b> Assess 1 May 05 (18mo) Revise 1 Nov 06 (3yr) <b>POC:</b> Team D <a href="mailto:alsad@langley.af.mil">alsad@langley.af.mil</a>
<b>NLW: Tactical Employment of Nonlethal Weapons</b> <b>Approved for Public Release</b>	15 JAN 03	FM 3-22.40 (FM 90-40) MCWP 3-15.8 NTTP 3-07.3.2 AFTTP(I) 3-2.45 USCG Pub 3-07.31	Supplements established doctrine and TTP providing reference material to assist commanders and staffs in planning/coordinating tactical operations. It incorporates the latest lessons learned from real world and training operations, and examples of TTP from various sources. <b>Current Status:</b> Assess 15 Jul 04 (18mo) Revise 1 Jan 06 (3yr) <b>POC:</b> Team F <a href="mailto:alsaf@langley.af.mil">alsaf@langley.af.mil</a>
<b>PEACE OPS: MTTP for Conducting Peace Operations</b> <b>Approved for Public Release</b>	26 OCT 03	FM 3-07.31 MCWP 3-33.8 AFTTP(I) 3-2.40	Provides tactical level guidance to the warfighter for conducting peace operations. <b>Current Status:</b> Assess 1 Apr 05 (18 mo) Revise 1 Oct 06 (3 yr) <b>POC:</b> Team E <a href="mailto:alsae@langley.af.mil">alsae@langley.af.mil</a>
<b>REPROGRAMMING: Multi-Service Tactics, Techniques, and Procedures for the Reprogramming of Electronic Warfare and Target Sensing Systems</b> <b>Distribution Restricted</b>	6 JAN 03	FM 3-51.1 (FM 34-72) MCRP 3-40.5B NTTP 3-13.1.15 AFTTP(I) 3-2.7	Supports the JTF staff in the planning, coordinating, and executing of reprogramming of electronic warfare and target sensing systems as part of joint force command and control warfare operations. <b>Current Status:</b> Assess 15 Jul 04 (18mo); Revise 1 Jan 06 (3yr) <b>POC:</b> Team G <a href="mailto:alsag@langley.af.mil">alsag@langley.af.mil</a>
<b>RISK MANAGEMENT</b> <b>Approved for Public Release</b>	15 FEB 01	FM 3-100.12 (FM 5-19.1) MCRP 5-12.1C NTTP 5-03.5 AFTTP(I) 3-2.34	Provides a consolidated multi-Service reference, addressing risk management background, principles, and application procedures. To facilitate multi-Service interoperability, it identifies and explains the risk management process and its differences and similarities as it is applied by each Service. <b>Current Status:</b> Assessed "retain at ALSA" Re-assess 1 Oct 05 (18 mo) Revise 1 Feb 07 (3 yr) <b>POC:</b> Team G <a href="mailto:alsag@langley.af.mil">alsag@langley.af.mil</a>
<b>SURVIVAL, EVASION, AND RECOVERY: Multi Service Procedures for Survival, Evasion, and Recovery</b> <b>Distribution Restricted</b>	19 MAR 03	FM 3-50.3 (FM 21-76-1) MCRP 3-02H NTTP 3-50.3 AFTTP(I) 3-2.26	Provides a weather-proof, pocket-sized, quick reference guide of basic survival information to assist Service members in a survival situation regardless of geographic location. <b>Current Status:</b> Revise 1 Mar 06 (3yr) <b>POC:</b> Team B <a href="mailto:alsab@langley.af.mil">alsab@langley.af.mil</a>
<b>TADIL-J: Introduction to Tactical Digital Information Link J and Quick Reference Guide</b> <b>Approved for Public Release</b>	30 JUN 00 <b>Transitioned to FORSCOM JTAO handbook Nov 04</b>	FM 6-24.8 (FM 6-02.241) MCRP 3-25C NTTP 6-02.5 AFTTP(I) 3-2.27	Provides a guide for warfighters with limited or no experience or background in TADIL J and needing a quick orientation for supplemental or in-depth information. TADIL J is also known in NATO as Link 16. <b>Current Status:</b> Transitioned Incorporated into FORSCOM Joint Tactical Air Operations Procedural Handbook <b>POC:</b> Team C <a href="mailto:alsac@langley.af.mil">alsac@langley.af.mil</a>
<b>TAGS: Multi-Service Tactics, Techniques, and Procedures for the Theater Air Ground System</b> <b>Approved for Public Release</b>	8 DEC 03	FM 3-52.2 (FM 100-103-2) MCRP 3-25F NTTP 3-56.2 AFTTP(I) 3-2.17	Promotes inter-Service awareness regarding the role of airpower in support of the JFC's campaign plan, increases understanding of the air-ground system, and provides planning considerations for the conduct of air-ground operations. <b>Current Status:</b> Assess 1 Jun 05 (18mo) Revise 1 Dec 06 (3yr) <b>POC:</b> Team D <a href="mailto:alsad@langley.af.mil">alsad@langley.af.mil</a>
<b>TACTICAL RADIOS: Multi-Service Communications Procedures for Tactical Radios in a Joint Environment</b> <b>Approved for Public Release</b>	14 JUN 02	FM 6-02.72 (FM 11-1) MCRP 3-40.3A NTTP 6-02.2 AFTTP(I) 3-2.18	Standardizes joint operational procedures for Single-Channel Ground and Airborne Radio Systems (SINCGARS) and provides an overview of the multi-Service applications of Enhanced Position Location Reporting System (EPLARS). <b>Current Status:</b> Revise 14 Jun 05 (3 yr) <b>POC:</b> Team G <a href="mailto:alsag@langley.af.mil">alsag@langley.af.mil</a>

## ALSA PROJECTS UPDATE CURRENT ALSA PUBLICATIONS

<b>TITLE</b>	<b>DATE</b>	<b>PUB #</b>	<b>DESCRIPTION</b>
<b>TMD IPB: Multi-Service Tactics, Techniques, and Procedures for Theater Missile Defense Intelligence Preparation of the Battlespace</b> <b>Approved for Public Release</b>	4 MAR 02 <b>Transitioned to Army Nov 04</b>	FM 3-01.16 MCRP 2-12.1A NTTP 2.01.2 AFTTP(I) 3-2.36	Provides a systematic and common methodology for analyzing the theater adversary missile force in its operating environment. <b>Current Status:</b> Transitioned (New POC is CAC/CADD, Ft. Leavenworth) <b>POC:</b> Team B <a href="mailto:alsab@langley.af.mil">alsab@langley.af.mil</a>
<b>TST: MTTP for Targeting Time-Sensitive Targets</b> <b>Distribution Restricted</b>	20 APR 04	FM 3-60.1 3-16D NTTP 3-60.1 AFTTP(I) 3-2.3	Provides the JFC, the JFC's operational staff, and components unclassified MTTP to coordinate, de-conflict, synchronize, and prosecute TSTs within any AOR. Includes OIF and OEF lessons learned, multinational and other government agency considerations. Appendix D (COMUSCENTAF Counter-SCUD CONOPS and Playbook – Secret Rel GBR/AUS) Appendix F (TST collaboration tools) Appendix G (CGRS) available via electronic means only <b>Current Status:</b> Assess 1 Oct 05 (18mo) Revise 1 Apr 07 (3yr) <b>POC Team F</b> <a href="mailto:alsaf@langley.af.mil">alsaf@langley.af.mil</a>
<b>UHF TACSAT/ DAMA OPERATIONS: Multi Service Tactics, Techniques, and Procedures package for UHF TACSAT Frequency Management</b> <b>Approved for Public Release</b>	JUN 04	FM 6-02.90 MCRP 3-40.3G NTTP 6-02.9 AFTTP(I) 3-2.53	Documents TTP that will improve efficiency at the planner and user levels. (Recent operations at JTF level have demonstrated difficulties in managing limited number of UHF TACSAT frequencies.) <b>Current Status:</b> Assess 1 Dec 05 (18mo) Revise 1 Jun 07 (3yr) <b>POC Team C</b> <a href="mailto:alsac@langley.af.mil">alsac@langley.af.mil</a>
<b>UXO: Multi-Service Procedures for Unexploded Ordnance Operations (UXO)</b> <b>Approved for Public Release</b>	23 AUG 01	FM 3-100.38 MCRP 3-17.2B NTTP 3-02.4.1 AFTTP(I) 3-2.12	Describes hazards of unexploded explosive ordnance (UXO) submunitions to land operations, addresses UXO planning considerations, and describes the architecture for reporting and tracking UXO during combat and post conflict. <b>Current Status:</b> Active. FCD due to ALSA 23 May 05 <b>POC:</b> Team B <a href="mailto:alsab@langley.af.mil">alsab@langley.af.mil</a>

## NEW ALSA PROJECTS

<b>TITLE</b>	<b>EST PUB DATE</b>	<b>PUB #</b>	<b>DESCRIPTION AND STATUS</b>
<b>DETAINEE OPERATIONS</b> <i>MTTP for Detainee Operations in a Joint Environment</i> <b>Distribution Restricted</b>	NOV 04	FM 3-19.401 MCRP 4-11.8D NTTP 3-07.8 AFTTP(I) 3-2.51	MTTP regarding detainee operations to include transporting, transferring and holding of the high-risk detainees. <b>Current Status:</b> On hold awaiting DoD Joint Staff review. <b>POC Team B</b> <a href="mailto:alsab@langley.af.mil">alsab@langley.af.mil</a>
<b>INTERPRETER OPERATIONS</b> <b>FOUO</b>	APR 04	Center for Army Lessons Learned Handbook 04-7	Team B will monitor this project for 18 months following the release of the handbook and then decide whether to develop as an MTTP or remove it as a monitored project. <b>Current Status:</b> Complete. Available electronically at <a href="http://call.army.mil">call.army.mil</a> Printed as a Center for Army Lessons Learned (CALL) Handbook. <b>POC Team B</b> <a href="mailto:alsab@langley.af.mil">alsab@langley.af.mil</a>
<b>KILL BOX</b> <i>MTTP for Kill Box Operations</i> <b>Distribution Restricted</b>	APR 05	NTTP 3-09.2.1	This MTTP assists the Services and Joint Force Commanders in developing, establishing, and executing Kill Box procedures to allow rapid target engagement. This MTTP describes timely, effective multi-service solutions to FSCMs, ACMs, and maneuver control measures with respect to Kill Box operations. <b>Current Status:</b> Active. Signature Draft due to ALSA 15 April 05 <b>POC Team B</b> <a href="mailto:alsab@langley.af.mil">alsab@langley.af.mil</a>
<b>TACTICAL CONVOY OPERATIONS: MTTP for Tactical Convoy Operations</b> <b>Distribution Restricted</b>	MAR 05 <b>FAST TRACK</b>	FM 4-01.45 MCRP 4-11.3H NTTP 4-01.3 AFTTP(I) 3-2.58	Consolidates the Services' best tactics, techniques, and procedures used in convoy operations into a single multi-Service TTP. This MTTP focuses on combat support and combat service support forces and provides a quick reference guide for convoy commanders and subordinates on how to plan, train, and conduct tactical convoy operations in the contemporary operating environment. <b>Current Status:</b> Active. Awaiting print. <b>POC Team E</b> <a href="mailto:alsae@langley.af.mil">alsae@langley.af.mil</a>

# ALSA JASC

## Voting Members



Deputy Director/  
Chief of Staff, Futures Center  
Training & Doctrine Command  
(BG Fastabend)



Commander, Navy Warfare  
Development Command  
(RADM Kelly)



Joint Staff J-7  
(Maj Gen Catton)



Commander, JWFC  
(MG Gallinetti)



Commander, HQ Air Force  
Doctrine Center  
(Maj Gen Rayburn)



Director, Expeditionary  
Force Development Center,  
MCCDC  
(BG Gen Conant)



President, JSOU  
Director, SOKF  
(BG Risher)

## ALSA Teams

### Team A

Close Air/Fire Support  
DSN 575-0963/0903  
Comm: (757) 225-0963/0903  
[alsaa@langley.af.mil](mailto:alsaa@langley.af.mil)

### Team B

Special Operations  
DSN 575-0962/0906  
Comm: (757) 225-0962/0906  
[alsab@langley.af.mil](mailto:alsab@langley.af.mil)

### Team C

C2/Data Link  
DSN 575-0854  
Comm: (757) 225-0854  
[alsac@langley.af.mil](mailto:alsac@langley.af.mil)

### Team D

Air Defense/Battle Management  
DSN 575-0965/0853  
Comm: (757) 225-0965/0853  
[alsad@langley.af.mil](mailto:alsad@langley.af.mil)

### Team E

Homeland Security/Aviation  
DSN 575-0967/0968  
Comm: (757) 225-0967/0968  
[alsae@langley.af.mil](mailto:alsae@langley.af.mil)

### Team F

Sensor-to-Shooter  
DSN 575-0851/0964  
Comm: (757) 225-0851/0964  
[alsaf@langley.af.mil](mailto:alsaf@langley.af.mil)

### Team G

Information  
Operations/Intelligence  
DSN 575-0961/0905  
Comm: (757) 225-0961/0905  
[alsag@langley.af.mil](mailto:alsag@langley.af.mil)

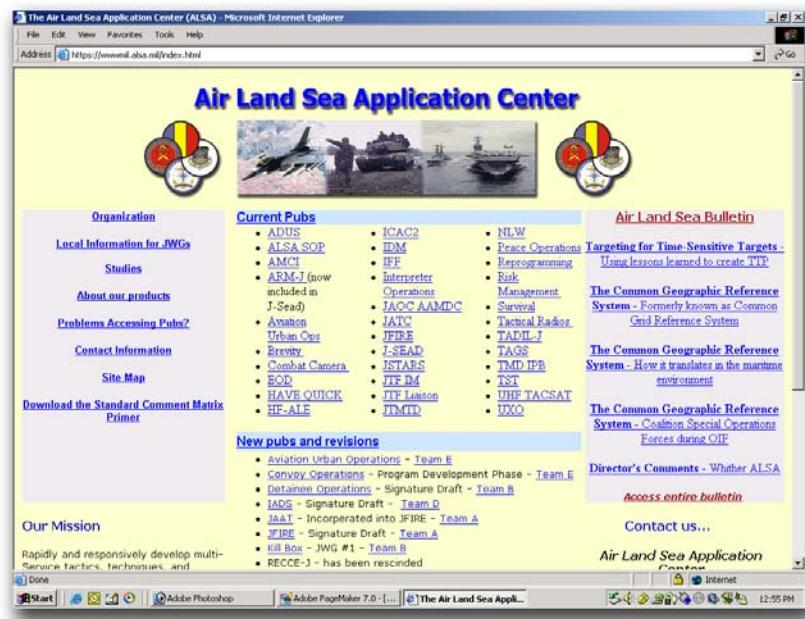
### ALSA FAX

DSN 575-0089  
Comm: (757) 225-0089

# WEB PAGE

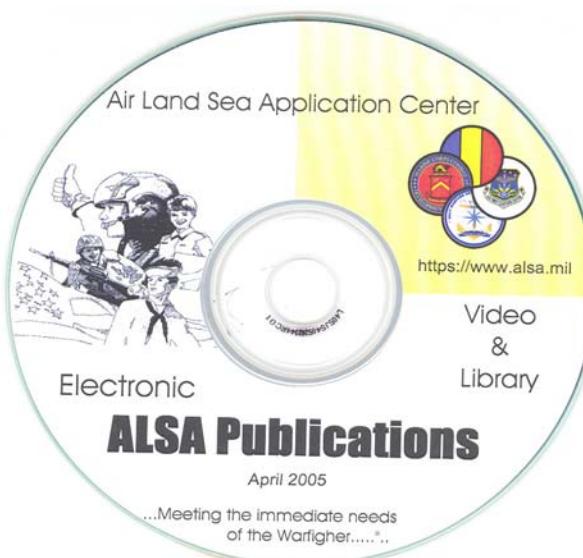
The ALSA Web site is hosted by the Air Combat Command at Langley Air Force Base. The Web site features the ALSA electronic library and can be accessed from any “.mil” system at <http://www.alsa.mil>. The ALSA electronic library can also be accessed over the Secret Internet Protocol Network at

<http://wwwacc2.langley.af.smil.mil/alsa>.



## ALSA CD-ROM

The ALSA CD-ROM is an easily transportable electronic library, including: all Multi-Service Tactics, Techniques, and Procedures maintained at ALSA; the history of ALSA; and the ALSA video. Order CDs by e-mailing [alsadmin@langley.af.mil](mailto:alsadmin@langley.af.mil), or calling DSN 575-0902, Comm: (757) 225-0902.



ALSA CENTER  
ATTN: ALSB  
114 ANDREWS STREET  
LANGLEY AFB VA 23665-2785

OFFICIAL BUSINESS